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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|------------------------------|---------------------|------------------|
| 10/613,587 | 07/02/2003 | Chialu Chang | IP 6409-US | 5549 |
| 7590 05/27/2005 | | | | |
| Dara L. Onofrio, Esq. c/o ONOFRIO LAW Suite 1600 1133 Broadway New York, NY 10010 | | EXAMINER SPEER, TIMOTHY M | | |
| | | ART UNIT 1774 | | PAPER NUMBER |
| DATE MAILED: 05/27/2005 | | | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

1188

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|------------------------------|------------------------|--|---------------------|--|
| Office Action Summary | Application No. | | Applicant(s) | |
| | 10/613,587 | | CHANG ET AL. | |
| | Examiner | | Art Unit | |
| | Timothy M. Speer | | 1774 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 17 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 21 and 22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-6 and 10-20 is/are rejected.
- 7) ☐ Claim(s) 7-9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>09/27/03</u> <u>9/22/03</u> <u>ms</u> | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-20, drawn to a thermal transfer sheet, classified in class 428, subclass 32.77.
 - II. Claims 21 and 22, drawn to a heat transfer method, classified in class 156, subclass 235.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case, the claimed product can be used in a materially different process, such as in a process of decorating a surface, wherein adhesive is applied to the opposite side of the support layer and the sheet is adhered to a surface, such as a wall.
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper. Moreover, because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.
4. During a telephone conversation with Mr. Richard Stewart on May 12, 2005, a provisional election was made with traverse to prosecute the invention of Group I, claims 1-20.

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Affirmation of this election must be made by applicant in replying to this Office action. Claims 21 and 22 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Drawings

6. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because reference numerals 10 and 20 are not illustrated in Figures 1 and 2, respectively. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Specification

7. The use of the trademarks Celgard3501 and Tinuvin have been noted in this application. They should be capitalized wherever they appear and be accompanied by their generic terminology. Moreover, applicant should carefully review the specification to ensure that all other trademarks are properly identified by their generic terminology.

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Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claim 18 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The Markus group recited in this claim is unclear, rendering this claim indefinite. For instance, the phrases "silicon based" and "acrylic based" are unclear, since the scope of these terms is uncertain, e.g., it is unclear when a material is properly referred to as "silicon based" or "acrylic based." Moreover, it is unclear whether the phrase "pressure sensitive adhesives" at the last line forms a part of the Markush group.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

11. Claims 1, 4-6, 10-17, 19 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Fu (US 2002/0009576).

Fu teaches articles comprising a support layer, an adhesive layer and an ink receiving layer, wherein the ink receiving layer is hydrophilic comprises a microporous polymeric film

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including at least one thermoplastic polymer (see abstract; and paragraphs [0019], [0025], [0028], and [0031], for instance). Fu discloses that the microporous polymer film may have a thickness of, for instance, about 25 to about 77 microns, within the range recited in instant claim 4, and that the polymer film may include a polyethylene or polypropylene, as presently claimed (see paragraphs [0024] and [0026], for instance).

Additionally, Fu discloses that the polymer film includes a hydrophilic melt additive, such as surfactants, as recited in instant claims 10 and 11 (see [0025], for instance). The hydrophilic melt additive may be present in the range recited in instant claim 12 (see [0025], for instance).

Regarding claims 13-17, Fu teaches that the article may include an additional ink receiving layer, which layer may include inorganic particles, e.g., silica or alumina, and an organic binder, e.g., polyurethane (see paragraphs [0030] and [0032], for instance).

With respect to instant claims 19, Fu teaches that the support layer is may be paper, cloth, non-woven fabric or plastic (see paragraph [0028], for instance). Additionally, Fu teaches that the microporous polymer film is ink-jet printable, as recited in instant claim 20 (see abstract, for instance).

Regarding the preamble recited in the instant claims, since the portion of the claim following the preamble does not rely on the preamble for completeness, the preamble is being afforded no patentable weight.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fu in view of Cole (USPN 6,582,803).

Fu was discussed above and fails to teach an article comprising a release layer or wherein the release layer is wax or silicone. Cole teaches that ink-jet printable thermal transfer media comprising, inter alia, stick resistant paper, e.g., silicone coated paper, where the silicon serves as a release layer (stick resistant) (col. 5, lines 59-61, for instance) and that such coated papers may be used in conjunction with hot melt adhesives (col. 6, lines 32-56, for instance). As notes above, Fu teaches the use of hot melt adhesives in articles comprising all of the other presently recited layers. Therefore, it would have been obvious to one having ordinary skill in the art to employ a release layer in the article of Fu, since Cole teaches that such layers impart advantageous stick resistance to such articles when used, for instance, as thermal transfer sheets. Therefore, instant claims 2 and 3 are prima facie obvious over this combination of references.

14. Claims 1-6 and 10-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cole in view of Fu.

Cole teaches thermal transfer sheets comprising a support layer, an adhesive layer and an ink-jet printable polymer layer (abstract; col. 2, lines 9-37; and col. 6, lines 32-56, for instance). The thermal transfer sheet may additionally include a release layer, such as silicone (col. 5, lines 59-60, for instance). The polymer layer may include polyester or polyolefins, as presently claimed.

Cole fails to teach that the polymer layer is microporous. Fu, as discussed above, teaches articles comprising an ink-jet printable, microporous, hydrophilic polymer layer, e.g., of a polyolefin. Fu teaches that such layers are excellent in ink-jet printing properties, since, for instance, they are fast drying, exhibit high gloss, good waterfastness, good lightfastness and are durable (paragraph [0018], for instance). Therefore, it would have been obvious to one having ordinary skill in the art to employ the microporous polymer layer of Fu in the ink-jet printable thermal transfer sheet of Cole, since Fu teaches that microporous polymer layers exhibit excellent ink-jet printing characteristics, as discussed above.

Regarding claims 4-6, and 10-20, as discussed above, Fu teaches each of the limitations recited in these claims. Therefore, since it would have been obvious to employ the microporous layer of Fu, generally, in the article of Cole, it likewise would have been obvious to one having ordinary skill in the art to use the various embodiments of such layers disclosed by Fu.

In light of the above, the present claims are considered to be prima facie obvious in view of the applied combination of references.

Double Patenting

15. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

16. Claims 1, 4-6, 10-17, 19 and 20 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-6 and 15-24 of copending Application No. 09/867,227 (Fu). Although the conflicting claims are not identical, they are not patentably distinct from each other because the "comprising" language in the claims of Fu do not exclude additional features, such as those presently claimed. Moreover, since, as discussed above, Fu suggests each of the additional limitation of instant claims 1, 4-6, 10-17, 19 and 20, they are considered to be prima facie thereover in view of the reasons of record, supra. The Examiner notes that Fu was published more than one year before the filing date of the instant application. Accordingly, the entire disclosure of Fu is available against the present application in this double patenting rejection.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

17. Claims 2 and 3 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-6 and 15-24 of copending Application No. 09/867,227 (Fu) in view of Cole (USPN 6,582,803). The Examiner notes that Fu was published more than one year before the filing date of the instant application. Accordingly, the entire disclosure of Fu is available against the present application in this double patenting rejection. The claims of Fu employ "comprising" language and, accordingly, are inclusive of additional components. As noted above in the 103 rejection, instant claims 2 and 3 are obvious in view of Fu in view of Cole.

This is a provisional obviousness-type double patenting rejection.

Allowable Subject Matter

18. Claims 7-9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art of record fails to teach or to suggest thermal transfer sheets wherein the microporous polymer film includes a thermoplastic polymer is a copolymer of a polyolefin and a polar functional monomer as recited in claim 7. Regarding claims 8 and 9, which depend from claim 7, the prior art of record fails to teach or to suggest microporous polymer films comprising a copolymer of polypropylene and a polar functional monomer (claim 8) or a copolymer of a polyolefin and a monomer selected from the group consisting of acrylic acid, acrylate, methacrylic acid, methacrylate, maleic acid, maleic anhydride, vinyl acetate, vinyl alcohol, vinylidene chloride and styrene (claim 9).

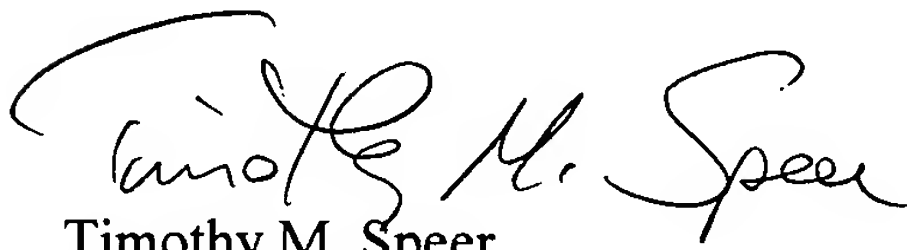
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy M. Speer whose telephone number is 571-272-8385. The examiner can normally be reached on M-Th, M-F.

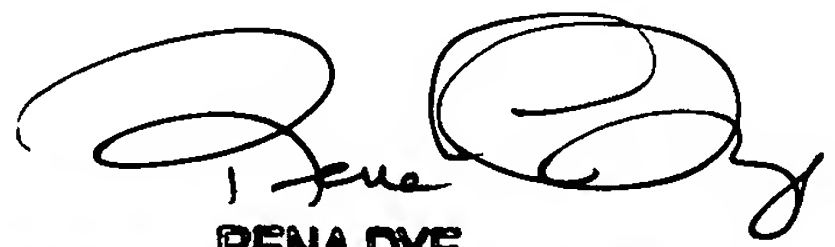
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena L. Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Timothy M. Speer



RENA DYE
SUPERVISORY PATENT EXAMINER
A.U. 1774 5/16/05